

WHAT IS CLAIMED IS

1. A fiber-optic laser pumped by a linearly polarized optical wave, comprising a birefringent optical fiber possessing a photo-recorded Bragg grating at each of its ends, wherein the optic fiber, 5 possessing very high birefringence of over 10^{-4} shows two orthogonal modes of polarization, and wherein the two gratings are made so as to show sufficient differences between the two resonance peaks of the Bragg wavelengths corresponding to the two modes of 10 polarization.

2. A fiber-optic laser according to claim 1, wherein the mean Bragg wavelengths of the two gratings are offset so that only the Bragg wavelengths corresponding to one and the same mode of polarization 15 are put into a state of coincidence for the two gratings.

3. A fiber-optic laser according to claim 1, comprising a device for the rotation of polarization by $\Pi/2$ enabling the polarizations to be made to rotate by 20 $\Pi/2$.

4. A fiber-optic laser according to claim 1, wherein the two gratings are made so that the resonance of a first polarization in a first grating R1 is made to coincide with the resonance of a second polarization 25 perpendicular to the first polarization in the second grating R2.

a 5. A fiber-optic laser according to ^{claim 1} ~~any of the~~ foregoing ~~claims~~, wherein the two gratings ~~show different~~ ^{show different} coefficients of reflectivity for two 30 orthogonal modes of polarization.

a 6. A fiber-optic laser according to claim 5, wherein the coefficients of reflectivity for a first mode of polarization are the maximum in both gratings

and wherein they are the minimum for the second mode of polarization orthogonal to the first mode.

7. A fiber-optic laser according to claim 1,
wherein the fiber is a fiber with a dissymmetrical
5 structure and/or a fiber withstanding asymmetrical
stresses.

12